

Applicant : James D. Hansen et al.
Serial No. : 10/078,970
Filed : February 18, 2002
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Attorney's Docket No.: 12950-001001 / 56512US002

REMARKS

Claims 1-6, 8-17, 19-23, and 28-33 are pending. Claims 14, 15, 20-23, and 28-30 are allowable. Claims 17, 19, 31, and 32 have been objected to. Claims 1-6, 8-13, 16 and 33 have been rejected.

In this response claims 1, 5, 6, 8, 9, 11, 17, and 31 have been amended, and claims 4, 13, and 33 have been cancelled. No new matter has been added by the amendments. Applicants request that all amendments be entered and considered.

Examiner Interview

Applicants thank the Examiner for the discussion held between the Examiner and applicants' representative, Gary Quick, on June 13, 2005 regarding possible claim amendment language.

Claim Objections

Claims 17 and 31 have been objected to, but would be allowable if rewritten in independent form including all limitations of the claims upon which they depend. Claims 17 and 31 have been amended to incorporate all limitations of claim 1, the claim on which they depended. No new matter has been added by these amendments.

Objected to claim 19 depends on amended claim 17, and objected to claim 32 depends on amended claim 31. Applicants request withdrawal of the objection to claims 17, 19, 31, and 32.

Claim 1

Claim 1 has been rejected under 35 U.S.C. § 102(b) as being anticipated by Wallshein, U.S. Patent No. 3,913,228 ("Wallshein") and rejected under 35 U.S.C. § 102(b) as being anticipated by Highgate et al., U.S. Patent No. 4,565,722 ("Highgate").

Claim 1 has been amended to include elements from claims 4 and 17. Claim 1 now recites in part an "orthodontic separator having the shape of an o-ring ... water activated ... wherein said separator comprises a hydrophilic polymer."

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Support for the amendments may be found throughout the application. The current application discusses an o-ring shape as a preferred shape at page 3, line 18, and an o-ring shape is used and discussed in examples 2, 3, and 4. The shape is illustrated in FIGS. 1A, 1B, 4A, and 4B. Water activation is described in the specification at page 3, lines 23-24, and page 7, lines 4-21. Water absorption is discussed at page 3, line 29 – page 4, line 5. Suitable hydrophilic materials are discussed at page 4, lines 6-23. The amendments are also supported by original claims 4, 5 and 17.

An o-ring shape works very well because the pressure of separation is distributed over the entire surface of the o-ring, and an o-ring provides a good fit, as described in the declaration of Tsi-Zong Tzou, submitted Jan. 18, 2005.

Wallshein discusses an elastic appliance used to separate and rotate teeth. The appliance generally has the shape of a plastic ring having at least one strand with reduced cross-sectional area compared to a main portion of the ring. However, the elastics used are hydrophobic, similar to those discussed in the background section of the current application at page 1. Wallshein does not discuss, teach, or suggest the use of a separator that is water activated, nor a separator comprising a hydrophilic polymer.

Highgate discusses deformable polymeric compositions, including a wedge shape for insertion into a tooth following nerve extraction (col. 4, lines 58-66), and a plug for blocking. However, Highgate does not teach, discuss, or suggest the use of an o-ring shape for any purpose whatsoever.

One of skill in the art would not be motivated to combine the teachings of Wallshein and Highgate, as there is no specific teaching, suggestion, or motivation to combine the references. Highgate is concerned with shapes for various surgical purposes. Illustratively, despite being filed nine years after Wallshein issued, no discussion or suggestion of an open shape, such as a donut or o-ring, appears in Highgate. In addition, the use of hindsight analysis is improper, as "obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting the combination." *Carella v. Starlight Archery*, 804 F.2d 135, 140 (Fed. Cir. 1986) (see also *Winner International*

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Royalty Corp. v. Wang, 202 F.3d 1340 (Fed. Cir. 2000)). There is no such teaching, suggestion, or incentive to support such a combination in either Wallshein or Highgate.

As neither Wallshein nor Highgate teach, discuss, or suggest an orthodontic separator having all the elements as claimed in amended claim 1, applicants request that the rejection of claim 1 be withdrawn.

As claim 1 now incorporates the elements of claim 4, claim 4 has been cancelled. Claims 5, 6, 8, 9, and 11 depended upon cancelled claim 4. Therefore, these claims have been amended, and now depend on claim 1.

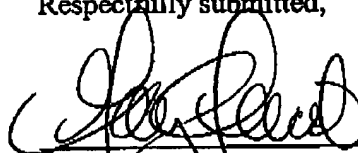
Claims 2-3, 5-6, 8-12, and 16 are dependent upon claim 1, and incorporate all limitations of claim 1. Therefore, applicants request that the rejection of these claims be withdrawn for at least the reasons discussed above regarding claim 1.

Applicants request that all amendments be entered and considered. No new matter has been added by the amendments. Applicants request reconsideration and allowance of all claims. If it would be helpful to prosecution, the Examiner is invited to contact the undersigned.

Please apply \$400.00 for excess claim fees and any other charges or credits to deposit account 06-1050.

Respectfully submitted,

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Gary L. Quick
Reg. No. 55,553

Fish & Richardson P.C., P.A.
60 South Sixth Street, Suite 3300
Minneapolis, MN 55402
Telephone: (612) 335-5070
Facsimile: (612) 288-9696

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